DERWENT-ACC-NO: 1992-066647
DERWENT-WEEK: 199612

TITLE: Homogenising solid-liq. mixt. of radioactive fuel residue - allowing conveyance through ducts without settling or deposition of solids

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PRIORITY-DATA: 1990FR-0010475 (August 20, 1990)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 472459 A	February 26, 1992	N/A	000	N/A
DE 69116032 E	February 15, 1996	N/A	000	B65G 053/30
FR 2665844 A	February 21, 1992	N/A	042	N/A
CA 2049466 A	February 21, 1992	N/A	000	N/A
CN 1060230 A	April 15, 1992	N/A	000	B02C 019/06
JP 05132139 A	May 28, 1993	N/A	014	B65G 053/30
TW 207023 A	June 1, 1993	N/A	000	G21F 009/30
CN 1025294 C	July 6, 1994	N/A	000	B02C

019/06
EP 472459 B1 January 3, 1996 F 019
B65G 053/30

DESIGNATED-STATES: DE GB DE GB

CITED-DOCUMENTS: FR 2006254; FR 2419890 ; GB 2111038 ; GB 2115074 ; US 4619406

APPLICATION-DATA:

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EP 472459A	N/A	1991EP-0402261	August 19, 1991
DE 69116032E	N/A	1991DE-0616032	August 19, 1991
DE 69116032E	N/A	1991EP-0402261	August 19, 1991
DE 69116032E	Based on	EP 472459	N/A
FR 2665844A	N/A	1990FR-0010475	August 20, 1990
CN 1060230A	N/A	1991CN-0108920	August 19, 1991
JP 05132139A	N/A	1991JP-0208231	August 20, 1991
TW 207023A	N/A	1991TW-0107412	September 18, 1991
CN 1025294C	N/A	1991CN-0108920	August 19, 1991
EP 472459B1	N/A	1991EP-0402261	August 19, 1991

INT-CL (IPC): B02C013/00; B02C019/00 ; B02C019/06 ; B02C019/18 ;
B65G053/30 ; G21C019/46 ; G21F009/16 ; G21F009/30

ABSTRACTED-PUB-N : EP 472459A

BASIC-ABSTRACT: A residual particle susp nsi n is delivered from a centrifugal decanter (10) to a vessel (16) which is connected in a closed loop with a pump (24) and a mill (26), which breaks up particle agglomerations to produce a more homogeneous mixt., which is then passed through a filter (30), designed to retain any large particles which might otherwise settle in a downstream duct (28). The mill (26) may be ultrasonic or may use a venturi ejector, with or without downstream baffles. Further ultrasonic transducers may be incorporated in decanter (10) to give the suspension a preliminary homogenising treatment and in filter (30) to break up agglomeration further.

USE -' Used to treat a residue, contg. highly radioactive particles of Zr, Mo, Ru etc. resulting from dissolving spent nuclear reactor fuel elements in hot nitric acid and sepg. relatively liquid and solid fractions in decanter (10). The homogenising enables the residue to be conveyed, without settling, through a long duct (28) to vitrification plant (32).

ABSTRACTED-PUB-NO: EP 472459B

EQUIVALENT-ABSTRACTS: Process for the treatment of agglomerates of solid particles suspended in a liq. in order to obtain a heterogeneous mixt. and the transfer of the mixt. in deposit-free manner between a transfer

tank (6)
communicating with th bottom of a setting appts. (10) and a storage tank (32)
by means of a long pipe (28), the process comprising the following stages:
prior reduction of the grain size of the particles within the setting appts.
(10) by means of ultrasonic waves, transfer of the particles into the transfer
tank (16) by gravity, reduction of the grain size of the particles introduced
into the transfer tank (16) by the circulation of the particles in a closed
loop (20) having means (26) for disintegrating the agglomerates until an
average grain size below a first given threshold is obtd. and transferring the
particles from the transfer tank (16) into the storage tank (32) by the long
pipe (28), whilst screening the particles in the immediate vicinity of the
transfer tank (16) so as to retain the particles having a grain size exceeding
a second given threshold.

CHOSEN-DRAWING: Dwg.1/6 Dwg.1/6

TITLE-TERMS:
HOMOGENISE SOLID LIQUID MIXTURE RADIOACTIVE FUEL RESIDUE ALLOW CONVEY THROUGH
DUCT SETTLE DEPOSIT SOLID

DERWENT-CLASS: J01 K07 P41 Q35

CPI-CODES: J02-A01; J02-A02A; K06-C; K07-B;

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1992-030513
N n-CPI Secondary Accessi n Numbers: N1992-050047

PAT-NO: EP000472459A1

DOCUMENT-IDENTIFIER: EP 472459 A1

**TITLE: Process and apparatus for treating solid agglomerates, in suspension in
a liquid, to ensure that a heterogeneous mixture can be conveyed in pipelines
without deposits.**

PUBN-DATE: February 26, 1992

INVENTOR-INFORMATION:

NAME	COUNTRY
DOLLFUS, JACQUES	FR
BARBE, ALAIN	FR

ASSIGNEE-INFORMATION:

NAME	COUNTRY
COGEMA	FR

APPL-NO: EP91402261

APPL-DATE: August 19, 1991

PRIORITY-DATA: FR09010475A (August 20, 1990)

INT-CL (IPC): B65G053/30

EUR-CL (EPC): B65G053/30

US-CL-CURRENT: 241/21

ABSTRACT:

During their re-processing, the irradiat d nuclear fuels are sh rn into pieces and then dissolved in a hot nitric solution which is then decanted in a settler (10). According to the invention, the fines from the dissolving operation collected at the bottom of the settler are broken up before being transferred to a vitrification site. To this end, the fines are directed towards a transfer vessel (16) and they are then circulated in a loop (20) comprising a pump (24) and a waste disintegrator device (26). Finally, transfer to the vitrification site takes place by passing via a screen (30) for fines, for example an ultrasonic screen. The waste disintegrator device (26) may be ultrasonic, of Venturi tube type, or of a type with a Venturi tube and baffle system. Preliminary disintegration may take place actually inside the settler (10). <IMAGE>

L Number	Hits	Search Text	DB	Time stamp
1	185	(427/600).CCLS.	USPAT; US-PGPUB	2003/01/27 15:05
2	97	(118/610).CCLS.	USPAT; US-PGPUB	2003/01/27 15:05
3	2352	((210/748) or (210/767) or (210/785) or (210/297)).CCLS.	USPAT; US-PGPUB	2003/01/27 15:06
4	11	((427/600).CCLS.) and @pd>20021003	USPAT; US-PGPUB	2003/01/27 15:07
5	8	((118/610).CCLS.) and (sonic or ultrasonic)	USPAT; US-PGPUB	2003/01/27 15:08
6	299	(((210/748) or (210/767) or (210/785) or (210/297)).CCLS.) and (sonic or ultrasonic)	USPAT; US-PGPUB	2003/01/27 15:08
7	99	(((210/748) or (210/767) or (210/785) or (210/297)).CCLS.) and ((sonic or ultrasonic) same filter)	USPAT; US-PGPUB	2003/01/27 15:08
8	25	(((210/748) or (210/767) or (210/785) or (210/297)).CCLS.) and ((sonic or ultrasonic) same filter same particle)	USPAT; US-PGPUB	2003/01/27 15:14
9	656	((sonic or ultrasonic) same filter same particle)	USPAT; US-PGPUB	2003/01/27 15:20
10	102	(((sonic or ultrasonic) same filter same particle)) same dispersion	USPAT; US-PGPUB	2003/01/27 15:14
11	8	((((sonic or ultrasonic) same filter same particle)) same dispersion) same agglomer$	USPAT; US-PGPUB	2003/01/27 15:16
12	36	(((sonic or ultrasonic) same filter same particle)) and receptor	USPAT; US-PGPUB	2003/01/27 15:18
13	4	(((sonic or ultrasonic) same filter same particle)) and photoreceptor	USPAT; US-PGPUB	2003/01/27 15:18
14	211	((sonication or sonic or ultrasonic) same filter same particle)	EPO; JPO; DERWENT	2003/01/27 15:20
15	211	((sonication or sonic or sonicating or ultrasonic) same filter same particle)	EPO; JPO; DERWENT	2003/01/27 15:21
16	0	(((sonication or sonic or sonicating or ultrasonic) same filter same particle)) and (photoreceptor)	EPO; JPO; DERWENT	2003/01/27 15:21
19	1	gb-2115074-$.did.	EPO; JPO; DERWENT	2003/01/27 15:29
20	2	ep-472459-$.did.	EPO; JPO; DERWENT	2003/01/27 15:31
21	1	("4337158").PN.	USPAT	2003/01/27 15:31